

CLAIM LISTING

1. (currently amended) A method for providing forward link packet data channel (~~F-PDCH~~) service to mobile stations (MSs) in a mobile communication system, the method comprising:

providing, by a cell in the mobile communication system, data transmission services via a forward link F-PDCH;

indicating to an MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH.

2. (currently amended) The method of claim 1,

wherein providing data transmission services comprises providing data transmission services to the MS and wherein indicating that the cell will not provide data transmission service to the MS comprises indicating, by the cell, that the cell will no longer provide data transmission service to the MS via the forward link F-PDCH.

3. (currently amended) The method of claim 1,

wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises sending a channel assignment message to the MS that indicates that the cell does not support a forward link F-PDCH.

4. (currently amended) The method of claim 1,

wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises sending a channel assignment message to the MS that indicates that the cell is not part of an active set of the MS.

5. (currently amended) The method of claim 1, further comprising

determining whether the cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the cell;

6. (currently amended)The method of claim 5,

wherein determining whether the cell is presently available comprises determining, when creating an active set for the MS, whether the cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the cell.

7. (currently amended)The method of claim 5,

wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the cell comprises requesting the cell to indicate the cell's availability to provide data transmission service to the MS via the forward link F-PDCH of the cell.

8. (currently amended)The method of claim 5,

wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the cell comprises receiving an indication that the cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the cell.

9. (currently amended)The method of claim 1, further comprising:

providing, by a serving cell in the mobile communication system, data transmission services via a forward link F-PDCH of the serving cell,

wherein providing data transmission services by the cell comprises providing data transmission services by a selected target cell of the MS to at least one MS in the mobile communication system other than the MS,

wherein indicating that the cell will not provide data transmission service to the MS comprises indicating, by the serving cell, that the cell will not provide data transmission service to the MS via the forward link F-PDCH.

10. (currently amended)The method of claim 1, wherein providing data transmission services comprises providing data transmission services to the MS by the cell via the forward link F-PDCH.

11. (currently amended)The method of claim 10,
wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises sending, by the cell, a Universal Handoff Direction message (UHDM) that indicates that the cell does not support a forward link F-PDCH.

12. (currently amended)The method of claim 10,
wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises sending, by the cell, a Universal Handoff Direction message (UHDM) that indicates that the cell is not part of an active set of the MS.

13. (currently amended)The method of claim 10,
wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises signaling, by the cell, a network initiated cancellation of the MS's present cell selection of the cell indicating a need for the MS to select an alternate cell to provide data transmission service to the MS via a forward link F-PDCH.

14. (currently amended)The method of claim 10,
wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link F-PDCH comprises signaling the MS via a forward packet data control channel (F-PDCCH) of the cell.

15. (currently amended) A method for providing forward link packet data ~~channel (F-PDCH)~~ service to mobile stations (MSs) in a mobile communication system, the method comprising:

providing, by a source base station (BS), data for transmission to an MS via a forward link ~~packet data channel (F-PDCH)~~;

receiving an indication that the MS intends to switch from a forward link ~~F-PDCH~~ of a serving cell to a forward link ~~F-PDCH~~ of a target cell for data transmission service;

determining whether the target cell is presently available to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell;

sending an indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell.

16. (original) The method of claim 15,

wherein receiving the indication that the MS intends to switch comprises receiving the indication by the source BS from the MS via the serving cell and

wherein the source BS comprises the serving cell and is a serving BS of the MS.

17. (original) The method of claim 15,

wherein receiving the indication that the MS intends to switch comprises receiving the indication by the source BS from a serving BS and

wherein the serving BS comprises the serving cell.

18. (original) The method of claim 15,

wherein receiving the indication that the MS intends to switch comprises receiving the indication by the source BS from a target BS and

wherein the target BS comprises the target cell.

19. (currently amended) The method of claim 15,
wherein determining whether the target cell is presently available to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell comprises receiving an indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell.
20. (original) The method of claim 19,
wherein receiving the indication that the target cell is presently unavailable comprises receiving the indication from the target cell.
21. (original) The method of claim 20,
wherein receiving the indication that the target cell is presently unavailable comprises receiving the indication from the target cell via a BSC-BTS signaling interface.
22. (original) The method of claim 19,
wherein receiving the indication that the target cell is presently unavailable comprises receiving the indication from a target BS.
23. (original) The method of claim 22,
wherein receiving the indication that the target cell is presently unavailable comprises receiving the indication from the target BS via an inter-BSC signaling interface.
24. (currently amended) The method of claim 19, further comprising:
subsequent to receiving the indication that the target cell is presently unavailable, receiving an indication that the target cell is available to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell;
sending an indication to the MS that the target cell is available to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell.

25. (currently amended)The method of claim 15,
wherein determining whether the target cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending an indication to a target BS that the MS intends to switch to the forward link F-PDCH of the target cell for data transmission service.
26. (currently amended)The method of claim 25,
wherein determining whether the target cell is presently available to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises receiving, in response to the indication that the MS intends to switch, an indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell.
27. (currently amended)The method of claim 15,
wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending the indication to the MS via the serving cell.
28. (currently amended)The method of claim 15,
wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending the indication to the MS via a serving BS.
29. (currently amended)The method of claim 15,
wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending the indication to the MS via a forward packet data control channel (F-PDCCH) of the serving cell.

30. (currently amended)The method of claim 15,

wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending the indication to the MS via a forward fundicated channel of a cell in an active set of the MS.

31. (currently amended)The method of claim 15,

wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending a Universal Handoff Direction message (UHDM) that indicates that the target cell does not support a forward link F-PDCH.

32. (currently amended)The method of claim 15,

wherein sending the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises sending a Universal Handoff Direction message (UHDM) that indicates that the target cell is not part of an active set of the MS.

33. (currently amended) A method for a mobile station (MS) to maintain forward link packet data channel (~~F-PDCH~~) service in a mobile communication system, the method comprising:

receiving, by an MS, data transmission service from a serving cell via a forward link ~~packet data channel (F-PDCH)~~ of the serving cell;

determining, by the MS, to switch to a target cell for data transmission service via a forward link ~~F-PDCH~~ of the target cell;

transmitting, by the MS, an indication of an MS intent to switch to the target cell;

receiving, by the MS, an indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell.

34. (currently amended) The method of claim 33,

wherein determining to switch to a target cell for data transmission service via a forward link ~~F-PDCH~~ of the target cell comprises performing cell selection among cells from an active set of the MS that provide forward link ~~F-PDCH~~ service.

35. (original) The method of claim 33,

wherein transmitting the indication of the MS's intent to switch to the target cell comprises transmitting the indication of the MS's intent to switch to the target cell using a switching pattern on a Reverse Channel Quality Indication Channel (R-CQICH) of the MS.

36. (currently amended) The method of claim 33,

wherein receiving the indication that the target cell is currently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell comprises receiving the indication by the MS via the serving cell.

37. (currently amended)The method of claim 33,

wherein receiving the indication that the target cell is currently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises receiving the indication by the MS via a forward packet data control channel (F-PDCCH) of the serving cell.

38. (currently amended)The method of claim 33,

wherein receiving the indication that the target cell is currently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises receiving the indication by the MS via the target cell.

39. (currently amended)The method of claim 33,

wherein receiving the indication that the target cell is currently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises receiving a Universal Handoff Direction message (UHDM) that indicates that the target cell does not support a forward link F-PDCH.

40. (currently amended)The method of claim 33,

wherein receiving the indication that the target cell is currently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises receiving a Universal Handoff Direction message (UHDM) that indicates that the target cell is not part of an active set of the MS.

41. (currently amended)The method of claim 33, further comprising,

subsequent to receiving the indication that the target cell is currently unavailable, receiving an indication that the target cell is available to provide data transmission service to the MS via the forward link F-PDCH of the target cell.

42. (currently amended) A base station (BS) comprising:
a base transceiver system (BTS)
adapted to provide communication services to a mobile station (MS),
including data transmission via a forward link ~~packet data channel~~
(~~F-PDCH~~);
a base site controller (BSC), communicatively coupled to the BTS,
adapted to provide data for transmission by the BTS to the MS via the
forward link ~~F-PDCH~~,
adapted to receive, via the BTS, an indication that the MS intends to
switch from the forward link ~~F-PDCH~~ to a forward link ~~F-PDCH~~ of a
target cell for data transmission service,
adapted to determine whether the target cell is presently available to
provide data transmission service to the MS via the forward link ~~F-~~
~~PDCH~~ of the target cell,
adapted to send, via the BTS, an indication to the MS that the target cell is
presently unavailable to provide data transmission service to the
MS via the forward link ~~F-PDCH~~ of the target cell.
43. (currently amended) The BS of claim 42,
wherein adapted to determine whether the target cell is presently available to
provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target
cell comprises adapted to receive an indication that the target cell is presently
unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~
of the target cell.
44. (currently amended) The BS of claim 42,
wherein adapted to determine whether the target cell is presently available to
provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target
cell comprises adapted to send an indication to a target BS that the MS intends to
switch to the forward link ~~F-PDCH~~ of the target cell for data transmission service.

45. (currently amended)The BS of claim 42,

wherein adapted to send the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises adapted to send, via the BTS, a Universal Handoff Direction message (UHDM) that indicates that the target cell does not support a forward link F-PDCH.

46. (currently amended)The BS of claim 42,

wherein adapted to send the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises adapted to send, via the BTS, a Universal Handoff Direction message (UHDM) that indicates that the target cell is not part of an active set of the MS.

47. (currently amended)The BS of claim 42,

wherein adapted to send the indication to the MS that the target cell is presently unavailable to provide data transmission service to the MS via the forward link F-PDCH of the target cell comprises adapted to send the indication to the MS via a forward packet data control channel (F-PDCCH) of the serving cell.

48. (currently amended) A mobile station (MS) comprising:
- a transceiver;
 - a processor, communicatively coupled to the transceiver,
 - adapted to receive, via the transceiver, data transmission service from a serving cell via a forward link ~~packet data channel (F-PDCH)~~ of the serving cell;
 - adapted to determine to switch from the serving cell to a target cell for data transmission service via a forward link ~~F-PDCH~~ of the target cell;
 - adapted to transmit, via the transceiver, an indication of the MS's intent to switch to the target cell;
 - adapted to receive, via the transceiver, an indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell.
49. (currently amended) The MS of claim 48,
- wherein the indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell comprises a Universal Handoff Direction message (UHDM) that indicates that the target cell does not support a forward link ~~F-PDCH~~.
50. (currently amended) The MS of claim 48,
- wherein the indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~ of the target cell comprises a Universal Handoff Direction message (UHDM) that indicates that the target cell is not part of an active set of the MS.

51. (currently amended)The MS of claim 48,
wherein adapted to receive the indication that the target cell is currently
unavailable to provide data transmission service to the MS via the forward link ~~F-PDCH~~
of the target cell comprises adapted to receive the indication by the MS via a forward
packet data control channel (F-PDCCH) of the serving cell.